

EVALUATION OF THE HIGH OCCUPANCY VEHICLE (HOV) LANES ON THE LONG ISLAND EXPRESSWAY

January 1997 HOV Lane User and Non-User Survey

SUMMARY

As part of the periodic evaluation of the High Occupancy Vehicle (HOV) lanes on the Long Island Expressway, an HOV lane user/non-user survey was conducted in January 1997. The survey included users of the HOV lanes during the HOV-reserved hours, HOV lane users during the non-reserved hours and general purpose lane users. From the initial opening in May 1994 through the summer of 1996, usage of the HOV lanes was restricted to carpools, buses and motorcycles between 6 AM and 8 PM, Monday to Friday. In the summer of 1996 the HOV-reserved hours were limited to the AM and PM peak periods -- from 6 AM to 10 AM and from 3 PM to 8 PM, Monday to Friday. When the survey was conducted, the modified HOV-reserved hours were in effect.

To develop a survey mailing list, data was collected on Tuesday, October 22, 1996 between the hours of 6 AM and approximately 7:30 PM. Both directions of the HOV and general purpose lanes were surveyed concurrently. In the HOV lanes, the survey differentiated between HOV lane users during the reserved hours (6 AM to 10 AM and 3 PM to 8 PM) and the non-reserved hours (10 AM to 3 PM).

The data collection procedures were similar to the 1994/1995 survey. License plates of vehicles in the HOV-lanes were videotaped and the information sent to the New York State Department of Motor Vehicles to obtain registrants' names and addresses. License plates of vehicles in the general purpose lanes were recorded manually using videocassettes and then transcribed into a database. Postage-paid mailback questionnaires, accompanied by a cover letter (see attached) describing the purpose of the survey and requesting registrants' cooperation in the survey, were then mailed 'out during the week of January 24, 1997. Two types of questionnaires were

developed: one for HOV lane users during HOV reserved hours, and the other for non-users (i.e., HOV lane users during the non-reserved hours and general purpose lane users). Copies of the questionnaires are attached.

A total of 8,631 questionnaires were mailed out: 3,171 to HOV lane users during the reserved hours, 1,117 to HOV lane users during the non-reserved hours, and 4,343 to the general purpose lane users. An excellent overall response rate of 24% was achieved. The response rate was higher for HOV lane users than for general purpose lane users, reflecting a similar finding as the 1994/1995 survey.

The enclosed tables provide a question-by-question summary of the survey. Table 1 of the HOV User summary shows the survey response rate for all surveys. Three sets of summaries are provided; HOV lane users during the reserved hours, HOV lane users during the non-reserved hours, and general purpose lane users.

URBITRAN / HAYDEN-WEGMAN

A Joint Venture

January 24, 1997

Dear Motorist:

Please help us to better understand your needs regarding traveling on the Long Island Expressway. The New York State Department of Transportation has hired Urbitran/Hayden-Wegman to do an objective study of the Expressway.

Your input is important! If you or any member of your household has driven on the LIE, it would be appreciated if the driver would fill out the enclosed questionnaire (both sides) and return it to us by February 14, 1997.

The information will be used to help assess current operations and improve services on the LIE and future transportation projects. Just return the completed questionnaire in the postage paid envelope. All returns are anonymous.

Thank you for your cooperation and assistance in this survey.

Sincerely,

Jerry Gluck, P.E.
Vice President

Long Island Expressway HOV Lane User Survey

NEW YORK STATE DEPARTMENT OF TRANSPORTATION

The Long Island Expressway HOV lanes are reserved for automobiles with 2 or more occupants, buses and motorcycles between 6am and 10AM and between 3PM and 8PM Monday through Friday. At all other times, automobiles carrying only the driver may also use the HOV lanes.

1. How often do you use the Long Island Expressway?

- 1 to 4 days a week
- 5 days a week or more
- Once a month or less
- 2 to 4 days a month

2. How often do you use the High Occupancy Vehicle (HOV) lanes?

- 1 to 4 days a week
- 5 days a week or more
- Once a month or less
- 2 to 4 days a month

3. The current HOV-reserved hours as stated above (6AM to 10AM and 3PM to 8PM: Monday-Friday):

- Are adequate to meet the needs of carpoolers/buses
- Should be extended during weekdays to meet the needs of more travelers
- Should be extended to include weekend travel needs
- Should be reduced

4. Have the HOV lanes caused you to change your travel patterns in any way? (Check all those that apply)

- Yes I No, I have made no changes because of the HOV lanes.
- Changed routes to use the HOV lane
- Now share rides occasionally to use the HOV lanes
- Joined or formed a carpool to travel to and from work
- Increased the size of a carpool
- Other (please specify) _____

5. If you changed routes to use the HOV lanes, which route(s) did you use previously?

- LIE Service Road
- Northern State Parkway
- Southern State Parkway
- Other (please specify) _____

6. If you carpool to work using the HOV lanes, how many days a week do you normally carpool?

- 1
- 2
- 3
- 4
- 5
- Do not carpool
- Do not work

7. How long have you been using the LIE HOV lanes?

- For more than a year
- 6 months to a year
- Less than 6 months

8. Why do you use the HOV lanes? (check as many as apply)

- Less congested
- Travel time savings
- Travel time reliability
- Reduced travel cost
- Employer incentive to carpool
- Reduced parking cost
- Environmental concerns
- Safer to use
- Other (please specify) _____

9. Do you encounter any problems

If yes, how often do you encounter these problems?

		Frequently Occasionally Just Once		
Entering the HOV lanes	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exiting the HOV lanes	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Understanding the: Signs	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Messages	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
By being passed in the HOV lane	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
With motorists traveling too fast	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
With motorists traveling too slow	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
With motorists illegally entering or exiting the HOV lane	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify) _____	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please continue on reverse side

Long Island Expressway Survey

NEW YORK STATE DEPARTMENT OF TRANSPORTATION

The Long Island Expressway HOV lanes are reserved for automobiles with 2 or more Occupants, buses and motorists between 6AM and 10AM and between 3PM and 8PM Monday through Friday. At all other times, automobiles carrying only the driver may also use the HOV lanes.

1. How often do you use the Long Island Expressway?

- 1 to 4 days a week Once a month or less
 5 days a week or more 2 to 4 days a month

2. Did you use the LIE regularly before the HOV lanes were added?

- Yes No

3. Including you, the driver, how many people are usually in the vehicle when using the LIE?

- One, I drive alone Two Three Four Five or more

4. Have you used the HOV lanes on the LIE during the HOV-reserved hours as stated above (6AM - 10AM and 3PM - 8PM: Monday through Friday)?

- Yes No

5. If yes, are you a regular user of the HOV lanes during these hours?

- Yes No

6. Have you used the HOV lanes during the non HOV-reserved hours ?

- Yes No

7. If you do not normally use the HOV lanes during the reserved hours, what are your reasons for not using them? (check all those that apply)

- Unable to find a car-pool partner
 I prefer to drive alone
 The vehicle I drive is not allowed in the HOV lanes
 There is no travel time benefit by using the HOV lanes
 I encounter problems entering the HOV lanes
 I encounter problems exiting the HOV lanes
 I don't feel safe while driving in the HOV lanes
 Motorists travel too fast in the HOV lanes
 Motorists travel too slowly in the HOV lanes
 HOV lanes are not long enough to benefit my trip
 Other (please specify) _____

8. The current LIE HOV-reserved hours of operation as stated above (6AM to 10AM and 3PM to 8PM: Monday-Friday):

- Are adequate to meet the needs of carpoolers/buses
 Should be extended during weekdays to meet the needs of more travelers
 Should be extended to include weekend travel needs
 Should be reduced

Please continue on reverse side

**EVALUATION OF THE HOV LANES ON
THE LONG ISLAND EXPRESSWAY**

SURVEY SUMMARY

**HOV LANE USERS
DURING RESERVED HOURS**

MAY 1997

Table 1

Survey Response

	HOV Users During Reserved Hours	HOV Users During Non- Reserved Hours	GPL Users	Total
# of License Plates Recorded/sent to DMV	3,660	1,452	5,763	10,875
# of Valid Registrations from NYSDMV	3,213	1,155	4,483	8,851
% of Valid Registrations	88%	80%	78%	81%
# of Questionnaires Mailed	3,171	1,517	4,343	8,631
# of Undeliverable Questionnaires	119	47	221	387
% of Undeliverable Questionnaires	4%	4%	5%	4%
# of Completed Questionnaires Returned	831	338	847	2,016
% of Completed Questionnaires Returned	27%	32%	21%	24%

Question I: How often do you use the Long Islam Expressway?

Table 2
Trip Frequency on the LIE

Trip Frequency	Number	Percentage
1-4 days /week	186	22
5 + days/week	556	67
2-4 days/month	22	3
once/month, or less	64	8
No Response	3	0
Total	831	100%

Question 2: How often do you use the HOV lanes?

Table 3

Trip Frequency in the HOV Lanes

Trip Frequency	Number	Percentage
1-4 days/week	236	28
5 + days/week	296	36
2-4 days/month	162	19
once/month, or less	129	16
No Response	8	1
Total	831	100%

Question 3. The current HOV-reserved hours (6AM to 10 AM and 3PM to 8PM Monday-Friday... ?

Table 4

Adequacy of Current HOV-Reserved Hours

Current HOV-reserved hours:	Number	Percentage
Are adequate to meet needs	516	62*
Should be extended during weekdays	87	10
Should be extended to include weekend travel needs	134	16
Should be reduced	105	13

* Percentage based on the number of respondents (831)

Question 4. Have the HOV lanes caused you to change your travel patterns in any way?

Table 5
Travel Pattern Changes

Travel Pattern Change	Number	Percentage
Changed Routes to use HOV lane	288	35*
Now shares a ride occasionally to use HOV	101	12
Joined or formed a carpool to travel to and from work	126	15
Increased the size of a carpool	15	2
Other	31	4
No Changes in Travel Patterns	448	54

* Percentage based on the number of respondents (831)

Question 4 (cont'd): *Have HOV lanes caused you to change your travel pattern in any way?*

List of "OTHER" Comments:

1. Travel time increased because of additional traffic on the LIE
2. Changed travel route to use HOV
3. Changed work hours in order to use car pool
4. HOV lanes save time
5. Use HOV lanes during reserved hours to save time
6. Owner of a Van & Bus Company (changed routes to use HOV)
7. Use HOV lanes sometimes
8. Now use car instead of truck because of truck restrictions
9. Use HOV lanes when on the LIE during HOV reserved hours
10. Traffic has increased on the LIE in non-HOV lanes. Use alternate routes. Previously used LIE 40 times per month
11. Changed routes to use HOV for convenience, less traffic, and no trucks
12. Depending on traffic reports will change routes to use HOV
13. Speeders constantly jam you in the HOV lane
14. Use HOV occasionally
15. Use LIE less
16. HOV is safer although drivers use it as a passing lane, ignoring barrier lines
17. Continued car pool to use HOV
18. Changed travel hours to use HOV
19. Car pool to use HOV
20. Used Northern State previously
21. Changed hours to use HOV
22. HOV should have a speed limit of 65-70 MPH
23. Changed work hours to use HOV
24. HOV saves me time so I can leave home later
25. There is traffic jam where HOV ends (East) where it merges into highway
26. There is traffic jam where HOV ends (Westbound) in the AM
27. HOV works well
28. Use other expressways less
29. Got rid of one car; now car pool to use HOV
30. HOV is better
31. Use other routes less

Question 5. If you changed routes to use the HOV lanes, which route(s) did you use previously?

Table 6
Previous Routes

Previous Route	Number	Percentage
LIE Service Road	74	9*
Northern State Parkway	176	21
Southern State Parkway	64	8
Other Routes	45	5

* Percentage based on the number of respondents (831)

Question 5 (cont' d): if you changed routes to use the HOV lanes, which route(s) did you use previously?

Table 6A
Other Routes

Other Routes	Number	Percentage
Sunrise Highway	15	33
Jericho Turnpike	6	13
LIE regular lanes	6	13
Vets Highway	2	5
Did not specify	16	36
Total	45	100%

Question 6. If you carpool to work, how many days a week do you normally Carpool?

Table 7
Frequency of Carpooling to Work

Frequency	Number	Percentage
1 day/week	20	2
2 days/week	28	3
3 days/week	37	4
4 days/week	43	5
5 days/week	262	32
Do not carp001	239	29
Do not work	54	7
No Response	148	18
Total	831	100%

Question 7. For how long have you been using the LIE HOV lanes?

Table 8
Frequency of Using the HOV Lanes

Frequency	Number	Percentage
More than 1 yea	552	66
6 months - 1 year	139	17
Less than 6 months	53	6
No Response	87	11
Total	831	100%

Question 8. Why do you use the HOV lanes?

Table 9
Reasons For Using HOV Lanes

Reasons For Using HOV Lanes	Number	Percentage
Less congested	639	77*
Travel time savings	592	71
Travel time reliability	212	26
Reduced travel cost	119	14
Employer incentive to carp001	19	2
Reduced parking cost	5	1
Environmental concerns	107	13
Safer to use	192	23
Other Reasons	29	3

* Percentage based on the number of respondents (831)

Question 8 (cont'd): Why do you use HOV lane?

List of "OTHER" Comments:

1. Owner of a commercial vehicle
2. Family business - car pool with my son
3. Don't car pool; can't use it; pain in the neck
4. Saves on gas
5. Take child to school
6. Can drive at higher speed most times
7. Do not use often
8. Less stress in changing lanes
9. Drive alone most times; use HOV when I can
10. No benefit
11. No trucks in HOV lane
12. Rarely use HOV
13. Do not use HOV often
14. Smoother road to drive
15. Use HOV because it's there
16. Develop ways to prevent drivers from crossing over to HOV lane improperly
17. Less lane changing
18. Use HOV for speed so cars cannot speed past me
19. Use HOV because there are no trucks
20. Faster to travel
21. Less stressful
22. Less stress; less frustration
23. Commercial vehicle
24. Car pool occasionally, depending on work schedule
25. Use HOV rarely
26. Extend HOV hours
27. Easier drive
28. Less aggravation
29. Do not use often

Question 9. Relates to whether problems are encountered with the HOV lanes.

Table 10

Problems Encountered in HOV Lanes

Problems Encountered	Yes	% Yes	No	% No	NR	% NR	Total	Total %
Entering the HOV lane	115	14	543	65	173	21	831	100%
Exiting the HOV lane	269	32	413	50	147	18	831	100%
Understanding the signs	68	8	579	70	184	22	831	100%
Understanding the messages	69	8	551	66	211	26	831	100%
Being passed in the HOV lane	320	39	342	41	169	20	831	100%
Motorists traveling too fast	228	27	407	49	196	24	831	100%
Motorists traveling too slow	576	69	131	16	124	15	831	100%
Illegal entering and exiting HOV lane	545	66	166	20	120	14	831	100%
Other problems	50	6	56	7	725	87	831	100%

Question 9 (cont 'd): Problems are encountered with the HOV lanes.

Table 10A
Other Problems Encountered in HOV Lanes

Other Problems	Number	Percentage
Illegal use of the HOV lanes (single drivers)	11	22
Tailgating (drive too fast)	10	20
Driving on HOV lanes is not amenable due to slow drivers.	5	10
Passing in HOV lane is impossible.	3	6
Police activities often disrupt traffic.	3	6
Law enforcement is absent.	3	6
School buses impede traffic.	2	4
Poor signage	2	4
Did not specify	11	22
Total	50	100%

Question 9 (cont'd). Relates to the frequency of which problems are encountered, for those respondents who indicated they encountered problems.

Table 11

Frequency of Problems Encountered in HOV Lanes, (for those encountering problems)

Problem Encountered	Number	Freq	Occ.	Once	Not Specify	Total Yes
Entering the HOV lane	115	22%	64%	7%	7%	100%
Exiting the HOV lane	269	26%	64%	4%	6%	100%
Understanding the signs	68	25%	33%	4%	38%	100%
Understanding the message	69	28%	33%	1%	38%	100%
Being passed in the HOV lane	320	20%	56%	9%	15%	100%
Motorists traveling too fast	228	36%	49%	0%	15%	100%
Motorists traveling too slow	576	31%	46%	3%	20%	100%
Illegal entering and exiting HOV lane	545	34%	48%	4%	14%	100%
Other problems	50	29%	17%	2%	52%	100%

Question 10. How strongly do you agree or disagree with the following statements regarding the HOV lanes?

Table 12

Agreement or Disagreement with HOV Lane Statements (%)

	1	2	3	4	5	NR	TOTAL
The HOV lanes:	%	%	%	%	%	%	%
Save time for users	73	19	3	1	1	3	100%
Contribute to a better flow of traffic on the LIE	53	24	7	6	6	4	100%
Are safe to use	49	27	12	5	3	4	100%
Motivate people to join or form carpools	26	25	23	10	11	5	100%
Are unfair to non-carpoolers	13	12	17	15	37	6	100%
Should be enforced more heavily	34	19	29	5	6	7	100%
Should be extended in length	73	8	8	1	6	4	100%

Legend:

1. Agree strongly
 2. Agree slightly
 3. Neither agree nor disagree
 4. Disagree slightly
 5. Disagree strongly
- NR-No Response

Question II. Relates to origins and destinations of respondents' last trip in the HOV lane during the HOV-reserved hours.

Table 13

Origin-Destination of HOV Lane Users

Origin-Destination	Number	Percentage
Suffolk to Suffolk	198	24
Suffolk to Nassau	199	24
Suffolk to New York City	133	16
Suffolk to Elsewhere	13	2
Nassau to Suffolk	87	10
New York City to Suffolk	64	8
Elsewhere to Suffolk	5	0
No Response	132	16
Total	831	100%

Question 11 (cont 'd) : Approximately what time did you start and end your last trip?

Table 14A

Trip Start Time: HOV Lane Users

Trip Start Time	Number	Percentage
AM Start Tie:		
Before 6 AM	39	5
6-7 AM	97	12
7-8 AM	148	18
8-9 AM	87	10
9-10 AM	55	7
10-12 Noon	20	2
Did not specify	34	4
Total AM Start Time	480	58%
PM Start Time:		
Noon to 3 PM	24	3
3-4 PM	54	6.
4-5 PM	43	5
5-6 PM	52	6
6-7 PM	16	2
After 7 PM	7	1
Did not specify	14	2
Total PM Start Time	210	25%
No Response	141	17%
Total	831	100%

Question 11 (cont'd) : Approximately what time did you end your last trip ?

Table 14B

Trip End Time: HOV Lane Users

Trip End Time	Number	Percentage
AM End Time:		
Before 6 AM	3	0
6-7 AM	40	5
7-8 AM	75	9
8-9 AM	121	15
9-10 AM	51	6
10-12 Noon	44	5
Did not specify	33	4
Total AM End Time	367	44%
PM End Tie:		
Noon to 3 PM	13	2
3-4 PM	25	3
4-5 PM	52	6
5-6 PM	75	9
6-7 PM	45	5
After 7 PM	21	3
Did not Specify	34	4
Total PM End Time	265	32%
No Response	199	24%
Total	831	100%

Question 11 (cont 'd): How long did it take for the trip?

Table 14C
Travel Time Distribution

Travel Time Distribution	Number	Percentage
<= 15 min	8	2
16 min. - 30 min.	113	23
31 min. - 45 min.	66	13
46 min. - 60 min.	150	30
61 min. - 90 min.	97	19
91 min. - 120 min.	35	7
> 120 min.	32	6
Total	501*	100%

* For respondents who indicated both start and end times for their trip

Question 12. What was the purpose of the Last trip you made using the HOV lane?

Table 15

Trip Purpose

Trip Purpose	Number	Percentage
To/from work	488	59
To/from business meeting	16	2
To/from school	67	8
To/from shopping	55	7
Recreation	19	2
Other non-work related	121	14
No Response	65	8
Total	831	100%

Question 13. Would you have used the LIE for this type of trip before the HOV lanes were added?

Table 16

Usage of LIE Before HOV Lane Addition

Would you have used the LIE for this type of trip before the HOV lanes were added?	Number	Percentage
Yes	641	77
No	138	17
No Response	52	6
Total	831	100%

Question 14. Including you, the driver, how many people were in the vehicle when using the HOV lane?

Table 17
Vehicle Occupancy

Number of Occupants	Number	Percentage
Two	562	68
Three	131	16
Four	50	6
Five or more	13	1
No Response	75	9
Total	831	100%

Question 15. On your last trip, how has your total travel time changed by using the HOV lanes?

Table 18
Travel Time Changes

Travel Time Changes	Number	Percentage
Decreased	584	70
Increased	14	1
No Change	89	11
Don't Know	72	9
No Response	72	9
Total	831	100%

Question 15 (cont'd) Relates to the range of travel timechanges for those respondents who indicated they experienced travel time changes.

Table 19

Range of Travel Time Changes: HOV Lane Users

Travel Time Changes	Number	Percentage
Decreased by: 1-5 minutes	60	7
6-10 minutes	164	20
11-15 minutes	163	20
16-20 minutes	96	12
More than 20 minutes	85	10
Did not quantify decrease	16	2
Increased by: 1-5 minutes	3	0
6-10 minutes	4	0
11-15 minutes	2	0
16-20 minutes	1	0
More than 20 minutes	2	0
Did not quantify increase	2	0
No change	89	11
Don't know	72	9
No response	72	9
Total	831	100%

Question 16. Additional comments made by respondents.

Table 20

Additional Comments : HOV Users

Comments	Number	Percentage
The HOV lanes should be extended east of Exit 57 <i>and</i> west of Exit 49.	86	10*
HOV lanes need heavier enforcement.	68	8
The HOV lanes should be extended east of Exit 57.	53	6
The HOV lanes should be extended west of Exit 49.	43	5
Convert HOV lanes into general purpose lanes.	38	5
Increase speed limit in HOV lanes to 65 mph.	29	3
HOV lanes do not make people carpool.	24	3
Enforce speed limit on the HOV lanes.	16	2
Construct more entrances and exits to/from HOV lanes.	16	2
Provide passing areas in HOV lanes.	15	2
Entering and exiting HOV lanes are difficult.	14	2
Add a lane in each direction on the LIE.	11	1
HOV lanes are underutilized.	10	1
Raise the minimum speed limit to 55 mph.	10	1
Encounter problems when exiting Exit 57.	9	1
Install some barriers to prevent illegal crossing.	5	1
HOV lanes need more effective signing.	4	0
NYSDOT should encourage carpooling with monetary support by employers.	3	0
Small pick-up trucks should be allowed in the HOV lanes.	3	0
Make HOV lanes as express lanes.	2	0
HOV lanes are unsafe to use.	2	0
Use HOV lanes as fourth general purpose lane between 9:00 AM and 4:00 PM.	1	0
Increase speed limit on LIE to 65 mph.	1	0

* Percentage based on the number of respondents (831)

**EVALUATION OF THE HOV LANES ON
THE LONG ISLAND EXPRESSWAY**

SURVEY SUMMARY

GENERAL PURPOSE LANE (GPL) USERS

MAY 1997

Question 1: How often do you use the Long Island Expressway?

Table 1
Trip Frequency on the LIE

Trip Frequency	Number	Percentage
1-4 days /week	226	27
5 + days/week	512	60
2-4 days/month	34	4
once/month, or less	68	8
No Response	7	1
Total	847	100%

Question 2: Did you use the LIE regularly before the HOV lanes were added?

Table 2

Usage of LIE Before HOV Lane Addition

Did you use the LIE regularly before the HOV lanes were added?	Number	Percentage
Yes	743	88
No	91	11
No Response	13	1
Total	847	100%

Question 3. Including you, the driver, how many people were in the vehicle when using the LIE?

Table 3
Vehicle Occupancy

Number of Occupants	Number	Percentage
One	603	71
Two	174	21
Three	27	3
Four	23	3
Five or more	10	1
No Response	10	1
Total	847	100%

Question 4: Have you used the HOV lanes on the LIE during the HOV-reserved hours (6AM - 10AM and 3PM - 8PM: Monday through Friday) ?

Table 4

Usage of HOV Lanes During Reserved Hours

Have you used the HOV lanes during the reserved hours?	Number	Percentage
Yes	426	50
No	419	50
No Response	2	0
Total	847	100%

Question 5: *If yes, are you a regular user of the HOV lanes during these hours?*

Table 5

Regular Usage of HOV Lanes During Reserved Hours

Are you a regular user of the HOV lanes during the reserved hours?	Number	Percentage
<i>Yes</i>	97	23
<i>No</i>	329	77
Total	426	100%

Question 7. If you do **not** normally use the HOV lanes during the reserved hours, what are your reasons **for not using** them?

Table 6

Reasons For Not Using HOV Lanes : General Purpose Lane Users

Reasons For Not Using HOV Lanes	Number	Percentage
Unable to find a car-pool partner	246	29*
I prefer to drive alone	232	27
The vehicle I drive is not allowed in the HOV lanes	39	5
There is no travel time benefit by using the HOV lanes	138	16
I encounter problems entering the HOV lanes	51	6
I encounter problems exiting the HOV lanes	72	9
I don't feel safe while driving in the HOV lanes	43	5
Motorists travel too fast in the HOV lanes	75	9
Motorists travel too slowly in the HOV lanes	145	17
HOV lanes are not long enough to benefit my trip	145	17
Other Reasons	168	20

* Percentage based on the number of respondents (847)

Question 7 (cont'd). If you do not normally use the HOV lanes during the reserved hours, what are your reasons for not using them?

Table 6A

Other Reasons For Not Using HOV Lanes

Other Reasons For Not Using HOV Lanes	Number	Percentage
Work schedule is staggered	53	32
Must drive alone	21	13
Business trip	7	4
Short distance trip	5	3
Hard to carp001	5	3
Because of tailgating	4	2
Stuck due to slow drivers	3	2
Exiting HOV lane is difficult.	3	2
There is no passing area.	2	1
No benefit	2	1
Did not specify	63	37
Total	168	100%

Question 8. The current LIE HOV-reserved hours (6AM to 10 AM and 3PM to 8PM, Monday-Friday...?

Table 7

Adequacy of Current HOV-Reserved Hours

Current HOV-reserved hours:	Number	Percentage
Are adequate to meet needs of carpoolers/buses	389	46*
Should be extended during weekdays	97	11
Should be extended to include weekend travel needs	110	13
Should be reduced	197	23

* Percentage based on the number of respondents (847)

Question 9. How strongly do you agree or disagree with the following statements regarding the HOV lanes?

Table 8

Agreement or Disagreement with HOV Lane Statements (%)

	1	2	3	4	5	NR	TOTAL
The HOV lanes:	%	%	%	%	%	%	%
Save time for carpoolers	40	29	11	5	6	9	100%
Contribute to a better flow of traffic	27	26	13	10	16	8	100%
Are safe to use	29	22	19	11	9	10	100%
Motivate people to join or form carpools	13	19	23	14	22	9	100%
Are unfair to non-carpoolers	24	13	21	14	18	10	100%
Should be enforced more heavily	22	16	36	6	9	11	100%
Should be extended in length	49	12	15	4	11	9	100%

Legend:

- 1. Agree strongly
- 2. Agree slightly
- 3. Neither agree nor disagree
- 4. Disagree slightly
- 5. Disagree strongly
- NR-No Response

Question 10: Did you use the HOV lanes for part of this trip ?

Table 9

Usage of HOV Lanes For This Trip

Did you use the HOV lanes for part of this trip?	Number	Percentage
Yes	216	25
No	556	66
No Response	75	9
Total	847	100%

Question 11. Relates to origins and destinations of respondents' last trip on the LIE during the HOV-reserved hours.

Table 10

Origin-Destination of General Purpose Lane Users

Origin-Destination	Number	Percentage
Suffolk to Suffolk	227	27
Suffolk to Nassau	204	24
Suffolk to New York City	118	13
Suffolk to Elsewhere	9	1
Nassau to Suffolk	115	14
New York City to Suffolk	57	7
Elsewhere to Suffolk	8	1
No Response	109	13
Total	847	100%

Question 12: Approximately what time did you start and end your last trip?

Table 11A

Trip Start Time: General Purpose Lane Users

Trip Start Tie	Number	Percentage
AM Start Time:		
Before 6 AM	64	8
6-7 AM	73	9
7-8 AM	121	14
8-9 AM	126	15
9-10 AM	74	9
10-12 Noon	77	9
Did not specify	2	0
Total AM Start Time	537	64%
PM Start Time:		
Noon to 3 PM	60	7
3-4 PM	39	5
4-5 PM	29	3
5-6 PM	34	4
6-7 PM	11	1
After 7 PM	20	2
Total PM Start The	193	22%
No Response	117	14%
Total	847	100%

Question 12 (cont 'd): Approximately what time did you end your last trip?

Table 11B
Trip End Time: General Purpose Lane Users

Trip End Time	Number	Percentage
AM End Tie:		
Before 6 AM	16	2
6-7 AM	19	2
7-8 AM	38	4
8-9 AM	84	10
9-10 AM	75	9
10-12 Noon	73	9
Did not specify	3	0
Total AM End Time	308	36%
PM End Time:		
Noon to 3 PM	56	7
3-4 PM	41	5
4-5 PM	59	7
5-6 PM	61	7
6-7 PM	67	8
After 7 PM	85	10
Did not specify	2	0
Total PM End Tie	371	44%
No Response	168	20%
Total	847	100%

Question 12 (cont'd): How long did it take for the trip?

Table 11C
Travel Time Distribution

Travel Time Distribution	Number	Percentage
<= 15 min	14	3
16 min. - 30 min.	99	22
31 min. - 45 min.	89	19
46min. - 60 min.	117	25
61 min. - 90 min.	71	16
91 min. - 120 min.	37	8
> 120 min.	34	7
Total	472*	100%

* For respondents who indicated both start and end times for their trip

Question 13. What was the purpose of the last trip you made using the LIE?

Table 12

Trip Purpose

Trip Purpose	Number	Percentage
To/from work	452	54
To/from business meeting	84	10
To/from school	20	2
To/from shopping	27	3
Recreation	62	7
Other non-work related	126	15
No Response	76	9
Total	847	100%

Question 14. On your last trip, how has your total travel time changed since the HOV lanes were added?

Table 13

Travel Time Changes

Travel Time Changes	Number	Percentage
Decreased	161	19
Increased	23	3
No Change	428	50
Don't Know	133	16
No Response	102	12
Total	847	100%

Question 14 (cont'd). On your last trip, how has your total travel time changed since the HOV lanes were added?

Table 14
Range of Travel Time Changes : General Purpose Lane Users

Travel Time Changes	Number	Percentage
Decreased by: 1-5 minutes	26	3
6-10 minutes	44	5
11-15 minutes	38	5
16-20 minutes	21	2
More than 20 minutes	20	2
Did not quantify decrease	12	1
Increased by: 1-5 minutes	1	0
6-10 minutes	6	1
11-15 minutes	6	1
16-20 minutes	1	0
More than 20 minutes	7	1
Did not quantify increase	2	0
No change	428	51
Don't know	133	16
No response	102	12
Total	847	100%

Question 15. Additional comments made by respondents.

Table 15

Additional Comments : General Purpose Lane Users

Comments	Number	Percentage
The HOV lanes should be extended east of Exit 57 and west of Exit 49.	50	6
HOV lanes need heavier enforcement.	29	3
The HOV lanes should be extended east of Exit 57.	11	1
The HOV lanes should be extended west of Exit 49.	22	3
Convert HOV lanes into general purpose lanes.	124	15
Increase speed limit in HOV lanes to 65 mph.	19	2
HOV lanes do not make people carpool.	18	2
Enforce speed limit on the HOV lanes.	20	2
Construct more entrances and exits to/from HOV lanes.	11	1
Provide passing areas in HOV lanes.	10	1
Entering and exiting HOV lanes are difficult.	15	2
Add a lane in each direction on the LIE.	12	1
HOV lanes are underutilized.	14	2
Raise the minimum speed limit to 55 mph.	19	2
Encounter problems when exiting Exit 57.	12	1
HOV lanes need more effective signing.	13	2
NYS DOT should encourage carpooling with monetary support by employers.	7	1
Small pick-up trucks should be allowed in the HOV lanes.	2	0
HOV lanes are unsafe to use.	10	1
Use HOV lanes as fourth general purpose lane between 9:00 AM and 4:00 PM.	9	1
Increase speed limit on LIE to 65 mph.	3	0
Make HOV lanes reversible lanes.	3	0
Make two lanes as HOV lanes in each direction.	2	0

* Percentage based on the number of respondents (847)

**EVALUATION OF THE HOV LANES ON
THE LONG ISLAND EXPRESSWAY**

SURVEY SUMMARY

HOV LANE USERS DURING NON-RESERVED HOURS

MAY 1997

Question 1: How often do you use the Long Island Expressway?

Table 1
Trip Frequency on the LIE

Trip Frequency	Number	Percentage
1-4 days /week	119	35
5 + days/week	156	46
2-4 days/month	15	4
once/month, or less	43	13
No Response	5	2
Total	338	100%

Question 2: Did you use the LIE regularly before the HOV lanes were added?

Table 2
Usage of LIE Before HOV Lane Addition

Did you use the LIE regularly before the HOV lanes were added?	Number	Percentage
Yes	304	90
No	31	9
No Response	3	1
Total	338	100%

Question 3. Including you, the driver. how many people were in the vehicle when using the LIE?

Table 3
Vehicle Occupancy

Number of Occupants	Number	Percentage
One	190	56
Two	119	35
Three	15	4
Four	2	1
Five or more	3	1
No Response	9	3
Total	338	100%

Question 4: Have you used the HOV lanes on the LIE during the HOV-reserved hours (6AM - 10AM and 3PM - 8PM: Monday through Friday)?

Table 4

Usage of HOV Lanes During Reserved Hours

Have you used the HOV lanes during the reserved hours?	Number	Percentage
<i>Yes</i>	<i>227</i>	<i>67</i>
<i>No</i>	<i>111</i>	<i>33</i>
No Response	0	0
Total	338	100%

Question 5: If yes, are you a regular user of the HOV lanes during these hours?

Table 5
Regular Usage of HOV Lanes During Reserved Hours

Are you a regular user of the HOV lanes during the reserved hours?	Number	Percentage
Yes	86	38
No	141	62
Total	227	100%

Question 6: Have you used the HOV lanes during the non HOV-reserved hours?

Table 6

Usage of HOV Lanes During Non HOV-Reserved Hours

Have you used the HOV lanes during the non HOV-reserved hours?	Number	Percentage
Yes	267	79
<i>No</i>	54	16
No Response	17	5
Total	338	100%

Question 7. If you do not normally use the HOV lanes during the reserved hours, what are your reasons for not using them?

Table 7

Reasons For Not Using HOV Lane-s : HOV Lane Users During Non-Reserved Hours

Reasons For Not Using HOV Lanes	Number	Percentage
Unable to find a carp001 partner	80	24*
I prefer to drive alone	45	13
The vehicle I drive is not allowed in the HOV lanes	12	4
There is no travel time benefit by using the HOV lanes	33	10
I encounter problems entering the HOV lanes	8	2
I encounter problems exiting the HOV lanes	14	4
I don't feel safe while driving in the HOV lanes	10	3
Motorists travel too fast in the HOV lanes	19	6
Motorists travel too slowly in the HOV lanes	66	20
HOV lanes are not long enough to benefit my trip	44	13
Other Reasons	76	22

* Percentage based on the number of respondents (338)

Question 7 (cont 'd). If you do not normally use the HOV lanes during the reserved hours, what are your reasons **for not** using them?

Table 7A
Other Reasons For Not Using HOV Lanes

Reasons For Not Using HOV Lanes	Number	Percentage
Work schedule is staggered	23	30
Business trip	7	9
Must drive alone	5	7
Because of tailgating	4	5
Avoid rush hour	3	4
No need	2	3
HOV lane is tied up	2	3
Short distance trip	1	1
Did not specify	29	38
Total	76	100%

Question 8. The current LIE HOV-reserved hours (6AM to 10 AM and 3PM to 8PM, Monday-Friday.. . ?

Table 8

Adequacy of Current HOV-Reserved Hours

Current HOV-reserved hours:	Number	Percentage
Are adequate to meet needs of carpoolers/buses	159	47*
Should be extended during weekdays	39	12
Should be extended to include weekend travel needs	44	13
Should be reduced	79	23

* Percentage based on the number of respondents (338)

Question 9. How strongly do you agree or disagree with the following statements regarding the HOV lanes?

Table 9

Agreement or Disagreement with HOV Lane Statements (%)

	1	2	3	4	5	NR	TOTAL
The HOV lanes:	%	%	%	%	%	%	%
Save time for carpoolers	49	25	10	3	5	8	100%
Contribute to a better flow of traffic on the LIE	41	22	9	7	13	8	100%
Are safe to use	45	25	11	8	3	8	100%
Motivate people to join or form carpools	18	19	28	10	15	10	100%
Are unfair to non-carpoolers	20	14	20	11	27	8	100%
Should be enforced more heavily	27	15	32	7	9	10	100%
Should be extended in length	56	10	12	3	10	9	100%

Legend:

1. Agree strongly
 2. Agree slightly
 3. Neither agree nor disagree
 4. Disagree slightly
 5. Disagree strongly
- NR-No Response

Question 10: Did you use the HOV lanes for part of this trip?

Table 10

Usage of HOV Lanes For Tbis Trip

Did you use the HOV lanes for part of this trip?	Number	Percentage
Yes	171	50
No	124	37
No Response	43	13
Total	338	100%

Question 11. *Relates to origins and destinations of respondents' last trip on the LIE during the HOV-reserved hours.*

Table 11

Origin-Destination of HOV Lane Users During Non-Reserved Hours

Origin-Destination	Number	Percentage
Suffolk to Suffolk	49	15
Suffolk to Nassau	70	21
Suffolk to New York City	82	24
Suffolk to Elsewhere	7	2
Nassau to Suffolk	43	13
New York City to Suffolk	34	10
Elsewhere to Suffolk	5	1
No Response	48	14
Total	338	100%

Question 12: Approximately what time did you start and end your last trip?

Table 12A

Trip Start Tie: HOV Lane Users During Non-Reserved Hours

Trip Start Time	Number	Percentage
AM Start Time:		
Before 6 AM	21	6
6-7 AM	15	4
7-8 AM	31	9
8-9 AM	44	13
9-10 AM	36	11
10-12 Noon	60	18
Total AM Start Time	207	61%
PM Start Time:		
Noon to 3 PM	30	9
3-4 PM	13	4
4-5 PM	12	4
5-6 PM	11	3
6-7 PM	6	2
After 7 PM	10	3
Total PM Start Tie	82	25%
No Response	49	14%
Total	338	100%

Question 12 (cont 'd): Approximately what time did you start and end your last trip?

Table 12B

Trip End Time: HOV Lane Users During Non-Reserved Hours

Trip End Time	Number	Percentage
AM End Time:		
Before 6 AM	5	1
6-7 AM	7	2
7-8 AM	10	3
8-9 AM	17	5
9-10 AM	29	9
10-12 Noon	48	14
Total AM End Time	116	34%
PM End Tie:		
Noon to 3 PM	58	17
3-4 PM	11	3
4-5 PM	12	4
5-6 PM	19	6
6-7 PM	17	5
After 7 PM	37	11
Total PM End Time	154	46%
No Response	68	20%
Total	338	100%

Question I2 (cont' d): How long did it take for the trip?

Table 12C
Travel Time Distribution

Travel Time Distribution	Number	Percentage
<= 15 min	4	2
16min. -30min.	21	10
31 min. - 45 min.	30	14
46 min. - 60 min.	41	20
61 min. - 90 min.	47	23
91 min. - 120 min.	35	17
> 120 min.	34	14
Total	208*	100%

* For respondents who indicated both start and end times for their trip

Question 13. What was the purpose of the last trip you made using the LIE?

Table 13
Trip Purpose

Trip Purpose	Number	Percentage
To/from work	141	42
To/from business meeting	40	12
To/from school	9	3
To/from shopping	7	2
Recreation	37	11
Other non-work related	73	21
No Response	31	9
Total	338	100%

Question 14. On your last trip, how has your total travel time changed since the HOV lanes were added?

Table 14
Travel Time Changes

Travel Time Changes	Number	Percentage
Decreased	108	32
Increased	9	3
No Change	132	39
Don't Know	49	14
No Response	40	12
Total	338	100%

Question 14 (cont 'd). On your last trip, how has your total travel time changed since the HOV lanes were added?

Table 15

Range of Travel Time Changes : HOV Lane Users During Non-Reserved Hours

Travel Time Changes	Number	Percentage
Decreased by: 1-5 minutes	13	4
6-10 minutes	35	10
11-15 minutes	26	8
16-20 minutes	16	5
More than 20 minutes	14	4
Did not quantify decrease	4	1
Increased by: 1-5 minutes	0	0
6- 10 minutes	4	1
11-15 minutes	2	1
16-20 minutes	0	0
More than 20 minutes	2	1
Did not quantify increase	1	0
No change	132	39
Don't know	49	14
No response	40	12
Total	338	100%

Question 15. Additional comments made by respondents.

Table 16

Additional Comments : HOV Lane Users During Non-Reserved Hours

Comments	Number	Percentage
The HOV lanes should be extended east of Exit 57 and west of Exit 49.	26	8"
HOV lanes need heavier enforcement.	21	6
The HOV lanes should be extended east of Exit 57.	9	3
The HOV lanes should be extended west of Exit 49.	8	2
Convert HOV lanes into general purpose lanes.	31	9
Increase speed limit in HOV lanes to 65 mph.	12	4
HOV lanes do not make people carpool.	8	2
Enforce speed limit on the HOV lanes.	8	2
Construct more entrances and exits to/from HOV lanes.	2	1
Provide passing areas in HOV lanes.	1	0
Entering and exiting HOV lanes are difficult.	7	2
Add a lane in each direction on the LIE.	11	3
HOV lanes are underutilized.	3	1
Raise the minimum speed limit to 55 mph.	19	6
Encounter problems when exiting Exit 57.	5	1
HOV lanes need more effective signing.	2	1
NYSDOT should encourage carpooling with monetary support by employers.	1	0
Small pick-up trucks should be allowed in the HOV lanes.	1	0
Make HOV lanes as express lanes.	1	0
HOV lanes are unsafe to use.	1	0
Use HOV lanes as fourth general purpose lane between 9:00 AM and 4:00 PM.	7	2

* Percentage based on the number of respondents (338)

1.

10

11
12
13

14
15

16